



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/828,971

04/21/2004

Charles L. Gray JR.

310121.422

5421

34212

7590

07/03/2007

SEED INTELLECTUAL PROPERTY LAW GROUP PLLC
701 FIFTH AVENUE
SUITE 5400
SEATTLE, WA 98104-7092

EXAMINER

BERTHEAUD, PETER JOHN

ART UNIT

PAPER NUMBER

3746

MAIL DATE

DELIVERY MODE

07/03/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/828,971	Applicant(s) GRAY, CHARLES L.	
	Examiner Peter J. Bertheaud	Art Unit 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-12 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/26/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "around" in claim 2 is a relative term which renders the claim indefinite. The term "around" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Claim 12 recites the limitation "first plurality" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Wahlmark 3,233,555.

Wahlmark discloses a variable displacement fluid device comprising a back plate 26 having a concave surface (see 26 in Fig. 2) configured to slideably receive a convex valve plate 62 thereon; first and second fluid ports 12, 13 formed in the concave surface and configured to transmit differentially pressurized fluid to the valve plate 62; first and second reaction plates 70 coupled to the back plate 26, each having a convex reaction surface (see upper portion of channel 64) substantially facing, and spaced a selected distance from, the concave surface of the back plate; and means for biasing the valve plate against the back plate (see col. 5, lines 3-24).

In addition, while features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function, because apparatus claims cover what a device is, not what a device does (*Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990)). Thus, if a prior art structure is capable of performing the intended use as recited in the preamble, or elsewhere in a claim, then it meets the claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3746

5. Claims 1-4, 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wahlmark 3,233,555 in view of Forster 4,893,549.

Wahlmark discloses a variable displacement fluid device comprising a back plate 26 having first and second fluid ports 12, 13 configured to be differentially pressurized; a plurality of reaction plates 70 rigidly coupled to the back plate 26; a valve plate 62 slideably coupled to the back plate 26 and having first and second fluid feed channels 80, 81 configured to receive fluid from the first and second fluid ports 12,13; and a plurality of hold-down ball bearings 63 positioned in respective hold-down sockets 67 formed in the valve plate 62, each of the hold-down ball bearings 63 configured to be biased, by pressurized fluid in the respective hold-down socket, against a surface 64 of one of the reaction plates 70 (see col. 6, lines 1-19). Wahlmark further discloses that the valve plate 62 is configured to slide against the back plate 26 in an arc exceeding around 20 degrees of rotation (see col. 4, lines 59-60). Wahlmark also discloses a barrel 12, rotatably coupled to the valve plate 62 and having a plurality of drive cylinders 53 formed therein; a plurality of drive pistons 52, each having a first end positioned in a respective one of the plurality of drive cylinders 53; and a thrust plate 140 having a surface configured to receive second ends of each of the plurality of drive pistons 52, the thrust plate 140 coupled to a drive shaft 11 of the pump/motor. However, Wahlmark does not teach the following claimed limitations taught by Forster.

Forster (Figs. 2 and 3) teaches an adjustable axial piston machine having a bent axis design comprising a back plate 9 having first and second fluid ports 21 configured to be differentially pressurized and a valve plate 6. Forster further teaches a plurality of

Art Unit: 3746

hold-down ball pistons 15 positioned in respective hold-down cylinders 17 formed in the valve plate 6, each of the hold-down ball pistons 15 configured to be biased, by pressurized fluid in the respective hold-down cylinder 17, so as to press the valve plate 6 against a surface 8 of the back plate 9 (see col. 4, lines 50-58). Forster also teaches that the plurality of hold down pistons 15 is distributed along first and second edges of a same surface of the valve plate (see 15 in Figs. 2 and 3). Forster further teaches that at least one of the hold down pistons 15 distributed along the first edge of the valve plate 6 is in fluid communication with the first fluid feed channel 21 (through 20) and at least one of the hold-down pistons 15 distributed along the second edge of the valve plate is in fluid communication with the second fluid feed channel (see Fig. 3). Forster also teaches that each of the plurality of hold-down pistons 15 comprises an aperture passing along a central axis from a first surface to a second surface thereof (see pistons in Fig. 4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pump of Wahlmark by implementing hold-down pistons into the valve plate in order to bias the valve plate towards the back plate (Forster, col. 4, lines 50-58).

6. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wahlmark 3,233,555 in view of Forster 4,893,549, and in further view of Schauer 3,382,813.

Wahlmark in view of Forster discloses the invention as discussed above. However, Wahlmark in view of Forster do not specifically teach a method of coupling a

Art Unit: 3746

first pressurized fluid source to a rotatable barrel via a first fluid feed channel in a valve plate and a first fluid port in a back plate; coupling a second pressurized fluid source to the rotatable barrel via a second fluid feed channel in the valve plate and a second fluid port in the back plate.

Schauer teaches a hydraulic pump or motor comprising a rotatable barrel 25 and a valve plate 35 within a back plate 13. Schauer further teaches a method of coupling a first pressurized fluid source to a rotatable barrel 25 via a first fluid feed channel 80 (Fig. 2) in a valve plate 35 and a first fluid port 80 (Fig. 3) in a back plate 13; coupling a second pressurized fluid source to the rotatable barrel via a second fluid feed channel 81 (Fig. 2) in the valve plate 35 and a second fluid port in the back plate 81 (Fig. 3) (see col. 4, lines 32-38).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pump of Wahlmark in view of Forster by specifically teaching a method concerning the coupling of various pressurized fluid sources to a rotatable barrel so as to accommodate the direction of rotation of the barrel (Schauer, col. 4, lines 32-38).

Allowable Subject Matter

7. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 3746


Conclusion

8. The prior art made of record, and not relied upon, noted in form 892, is considered pertinent to applicant's disclosure.


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J. Bertheaud whose telephone number is (571) 272-3476. The examiner can normally be reached on M-F 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Stashick can be reached on (571) 272-4561. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


PJB

6/25/07


ANTHONY D. STASHICK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700